Learn How to Draw Step-by-Step
MULTIMEDIA Lessons

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Lesson 13
Drawing with Perspective

Every artist struggles with Perspective…until they learn the right concepts and tools for handling it. So here I am going to assist you in understanding and using those tools.

Let me state, right out of the gate, that Perspective is NOT a right-brain exercise, that is, Perspective is very much about geometry, math, angles and lines. All great art masters understood and applied perspective. Perspective is not difficult, but is the foundation of a great drawing.

And, having a firm grasp of Perspective will not only allow you to create correctly proportioned drawings, but it will give you tremendous mastery of each and every one of your drawings, regardless of what it is you are drawing.

So many times, beginning artists will draw a house, barn, building or even book, only to see "something" wrong with the picture, but not know what it is and be frustrated by not having the right skills to correct it.

So here we enter the technical part of your art world. Here is your guiding light:

There is Beauty in Precision.

If you can accept that, you will "get" Lesson 13.

We will be talking about Perspective which includes Vanishing Points, Relative Distances and Foreshortening.

What is Perspective?

Perspective is how you see something and how you want others to see something. But it's also the reality of how something is accurately expressed in 2 dimensions. This is the ultimate goal of the artist—to take 3 dimensions and portray it in only 2.

Picasso well understood perspective, but twisted lines, angles and space in order to change the viewer's perspective of something—in order to get the viewer to think

differently by playing on perspective distortions. But, as the old saying goes, you can't break the rules until you understand them.

So where do we begin?

We start with a clear understanding of the exact rules for how to translate those 3 dimensions back down into 2. And THAT means "seeing" or imagining lines and planes that you CAN'T see but are quite naturally there behind the lines and planes you can see. In short, you have to start seeing your subjects in terms of imaginary and/or hidden lines and planes.

Let's start with 2 lines, parallel to each other:

No matter how far up or down these 2 lines travel, they will never meet.

If we were to take these 2 parallel lines and lay them down in front of us like railroad track, you would see something entirely different. The track appears to come together in the distance. We know they are parallel but they appear to converge in the distance.

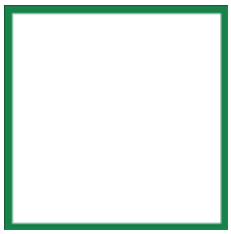
We call that point in the distance the **Vanishing Point.** Every drawing you will ever make has at least ONE vanishing point.

In fact, you'll also notice the tree tops and the shoulder also converge at the same point.

Here's another excellent example of the Vanishing point of converging parallel lines of the People Mover tunnel at the Frankfurt International Airport.

Again you will always have at least ONE VANISHING POINT. The vanishing point may be hidden if it is obstructed by another object, but it is always there, sometimes in subtle ways:

Let's take a square.



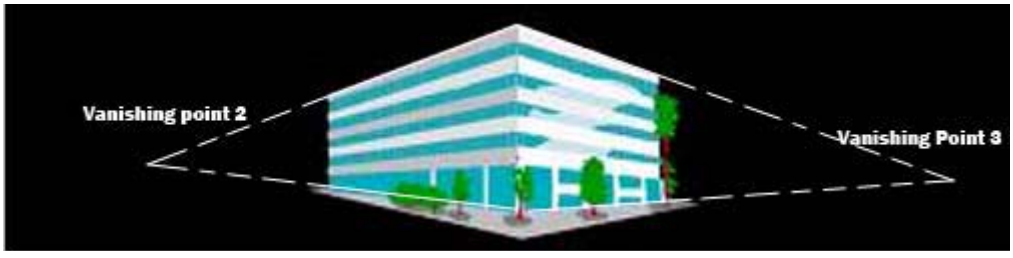
Both the top/bottom and the two sides are parallel to each other.

But if this square were, say, **the front** of a rectangular cube and we took a picture of it from the side like this…

…then you could see that the square is no longer square: the right side of the "square" (in the middle), is actually taller than the far left side. Why?

Because as our view moved towards the right (to expose the right side), the far left edge of the square is now further away from our eyes, and just like any object that gets farther away, it appears smaller. This is what happened to the train track; the distant railroad ties got smaller and smaller.

Whenever you can see any second side **of an object** you'll automatically have 2 new vanishing points:



So what's the difference between objects that have a single
In this case you will notice that the 3 corners of the building all have vertical lines.

That's because we are still looking at it from near the vertical middle. Whenever you see only 2 sides to a box or a building and you are in the vertical middle…your sides will be vertical.

Further, your drawing may contain **all 3 vanishing points**.

The box in the picture on the left is now sitting "on" the railroad tracks. The vanishing point is really still there, just hidden from view.

And as you've already seen, the box has 2 vanishing points.

Note: don't let a hidden vanishing point throw you off—just see through the lines to see where the hidden lines converge to find the single vanishing point.

Here's the sequence to find your vanishing points:

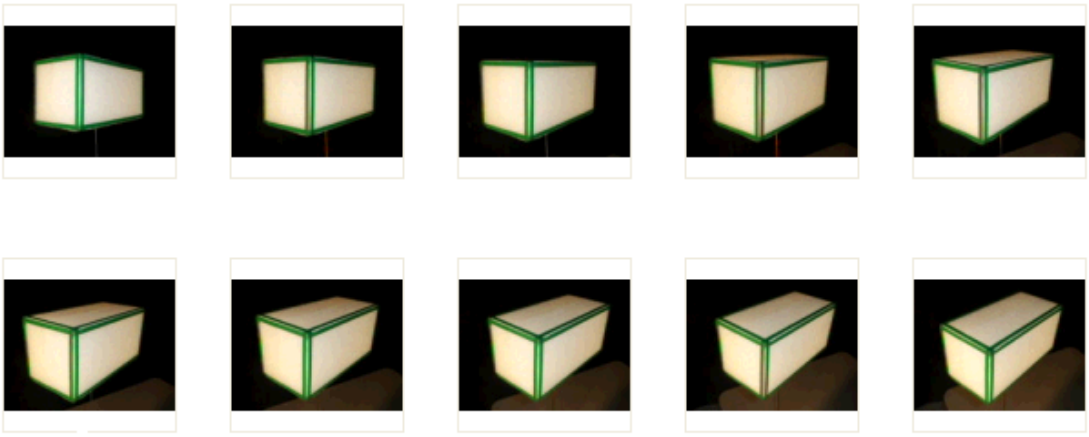
1) First look at your subject and ask yourself if you are looking "into" something—down a hallway, or into the distance—that's your clue that you can find a single vanishing point.
2) Then, look for objects that protrude "towards" you, like the corners of buildings or boxes; anything that is not flat in which you are looking at least 2 sides. These objects always have 2 vanishing points.

Finding your vanishing points in this order will help you orient your whole picture.

OK, now we have to expand our concept just one more step.

In both the building and the box you have seen 2 vanishing points where the top and bottom lines converge at some distant point (the sides that are farther away from you are smaller).

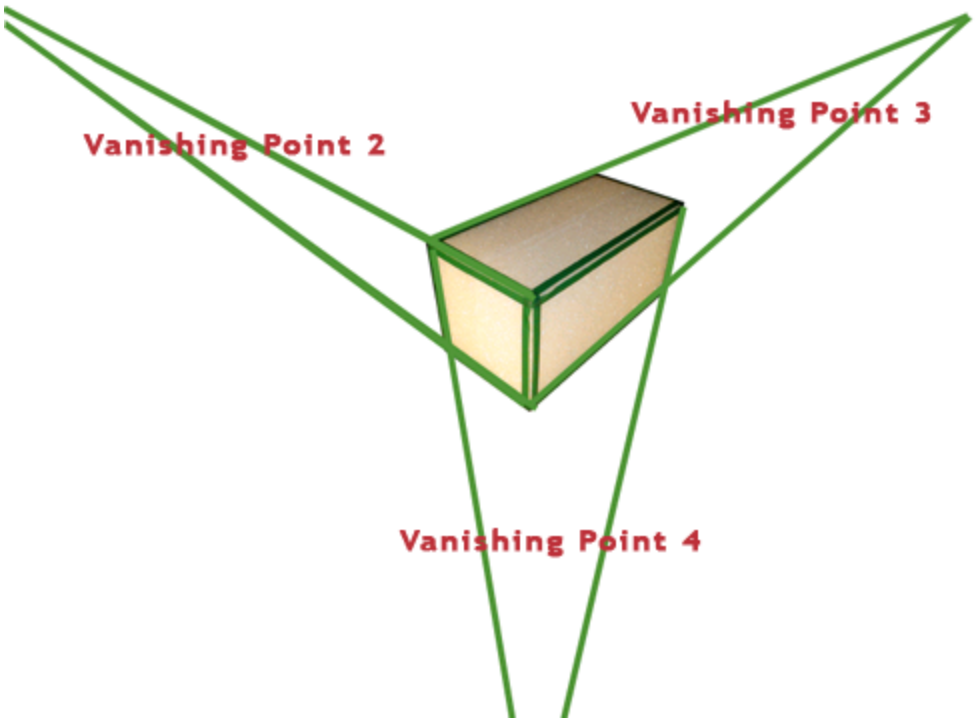
But what if we move *higher* or *lower* to the point so that **3 sides** of an object are now exposed. Watch what happens to the vanishing points:



If you noticed that the 2 vanishing points raised up (like wings) as the camera moved up, you were correct. But…

Did you also notice that you have a NEW 4th vanishing point? (BTW, the camera exaggerated these angles—in reality the angles are more subtle).

Here, this will help:



You will typically see this effect occur when drawing boxes, books, or aerial views of buildings.

Many times you will not see a vanishing point because it is so vague or difficult, like drawings of a mountain scene or portraiture like these:

Now let's look at some pictures: see if you can identify the vanishing points (and how many).

Practice "seeing" the vanishing points in what you are drawing you will find your drawings will improve.

Now for your exercise. Set up either a box or a block (as in the video), a book standing up (don't copy and print this picture, I want you practice in the 3-D mode as that will force you to "see" in 2 dimensions.

Remember and apply everything you have learned up to this point.

In the video Julinya is going to introduce you to a new tool, the plumb bob and plumb line. That is just a string and a small weight that you can hold over your subject to make sure you the vertical points align the same way as over your drawing—Make GENEROUS use of it, especially when doing buildings.

Ok, here's the video, which will demonstrate drawing using vanishing points—and the important tools that you have already learned which will be most useful to you.

http://www.how-to-draw-online.com/downloads/L13-480VeT.pdf

Keep up that practicing!